

Application Serial No. 10/047,317; filed January 14, 2002  
Response to Office Action of February 10, 2005

### **REMARKS**

Claims 1-33 are pending in the application.

Claims 1, 7, 8, 9, 11, 12, 15-20, 23, and 26-33 are amended.

Reconsideration of claims 1-33 is respectfully requested.

### **The Office Action**

Claims 1-17 and 19 were objected to for informalities.

Claims 1, 7, 13-18, and 27-29 were rejected under 35 U.S.C. §102(a) as being anticipated by Edwards, et al. (U.S. Patent No. 6,077,480).

Claims 1, 8-9, 11-12, 18, 20-22, and 30 were rejected under 35 U.S.C. §102(b) as being anticipated by Childers, et al. (U.S. Patent No. 5,876,664).

Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Childers in view of Naperkowski, et al. (U.S. Patent No. 5,949,958).

Claims 8-11, 15, 17, and 28 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

Claim 10 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Childers in view of Edwards.

Claim 19 was rejected under 35 U.S.C. §103(a) as being unpatentable over Childers.

Claims 23 and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Childers in view of Edwards.

Claims 25-26 were rejected under 35 U.S.C. §103(a) as being unpatentable over Childers in view of Raniwala (U.S. Patent No. 6,645,429).

Claim 31 was rejected under 35 U.S.C. 103(a) as being unpatentable over Childers in view of Rickloff, et al. (U.S. Patent No. 5,445,792).

Claim 32 was rejected under 35 U.S.C. 103(a) as being unpatentable over Childers and further in view of Naperkowski.

Claim 33 was allowed.

### **The Claim Objections**

Applicants have attended to each of the claim objections as suggested by the Examiner. Accordingly, it is respectfully requested that the objections be withdrawn.

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The 35 U.S.C. §112

Applicants have amended the claims to attend to each of the §112 rejections and respectfully request that the rejections now be withdrawn. In particular, claims 8, 9, 12, 15, and 28 has been amended to call for "a mixing zone" in place of "an injection zone". Claims 9 and 11 have been amended to call for a dehumidifier in place of a dryer. Claim 17 has been amended to call for "the means for introducing the liquid" to include a metering pump.

Allowed claim 33 has been amended to correct minor errors which have no bearing on patentability.

The References of Record

US Patent No. 6,077,480 to Edwards discloses a vaporization system with a plurality of vaporizers **10**, each of which inject hydrogen peroxide vapor into a stream of carrier gas supplied by a generator **20**. The carrier gas flows through the respective vaporizer **10** and into an enclosure **32** via a supply line **30**.

US Patent No. 5,949,958 to Naperkowski discloses a flash steam generator **10** for a steam sterilizer **30**. The generator comprises a metal block **11** with a bore **12** therethrough which provides a non-linear flow path.

US Patent No. 5,445,792 to Rickloff, et al. is directed to a sterilization method. Room air is drawn into a vaporizer **14** for hydrogen peroxide and enters the interior of a cassette **26** situated within a warming cabinet **34**. Another stream of room air is heated by a heater **38** and circulates through the warming cabinet, around the exterior of the cassette. The two streams of air do not meet at a mixing zone.

U.S. Patent No. 6,645,429 to Raniwala discloses a sterilization system in which sterilizing liquid from a tank **32** is pumped to spray nozzles **42** in a food packaging room.

U.S. Patent No. 5,876,664 to Childers, et al. discloses in Figure 8 a liquid decontaminant vaporizer including heaters **60**, **61**, **62** and a tortuous path **64** therethrough.

The Claims Distinguish over the References of Record

**Claim 1** has been amended in accordance with the Examiner's stated reasons for allowance of claim 33.

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Accordingly, it is submitted that claim 1, and claims 2-6, 8-11 and 13-15 dependent therefrom distinguish over the references of record.

**Claim 12** has been placed in independent form and calls for a vapor decontamination system which includes a first duct along which a first carrier gas flow is passed to a defined region and a heated block for dispersing a liquid which includes an antimicrobial compound in a carrier gas. An outlet of the block is connected to the duct for supplying the dispersed liquid and carrier gas into the duct for absorption into the carrier gas passing through the duct at a mixing zone. A source of a second carrier gas flow is connected with the block inlet for creating a positive pressure differential from the block to the mixing zone.

The references of record do not disclose such a system. Childers discloses introducing liquid sterilant into a vaporizer unit **18**. The vaporized liquid enters a closed loop circuit **16** with a carrier gas and enters a sealed chamber **12**. Childers makes no suggestion of an outlet of a flash vaporizer being connected to a duct for supplying the dispersed liquid and carrier gas into the duct for absorption into carrier gas passing through the duct, at a mixing zone. Rather, the vaporized liquid and carrier gas flow together in the closed loop **16**. There is no mixing zone as presently claimed where dispersed liquid and carrier gas are absorbed into carrier gas flowing through a duct.

Accordingly, it is submitted that claim 12, and dependent claims 7, 16, and 17, distinguish over the reference of record.

**Claim 18** has been amended to call for a method which includes pumping a carrier gas through a duct to a defined region. In a passage different from the duct, a liquid is converted into an antimicrobial dispersion. The formed dispersion is injected into the carrier gas in the duct at a mixing zone upstream of the defined region.

The references of record make no suggestion of generating an antimicrobial dispersion in a passage different from the duct and injecting the formed dispersion into the duct in which a carrier gas passes to a defined region. Rather, in Childers and Edwards, the carrier gas flow goes through the vaporizer. The carrier gas mixes with the vapor as it forms in the vaporizer and cools the heated vaporizing surface. In Childers and Edwards, there is no suggestion of forming an antimicrobial dispersion outside the main carrier gas flow and injecting the antimicrobial dispersion into the main carrier gas flow.

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distinguish over the references of record.

Comments on the Examiner's Statement of  
Reasons for the Indication of Allowable Subject Matter

In the statement of reasons for the indication of allowable subject matter, the Examiner indicates that: "Claim 33 includes the limitations for the method of decontaminating an enclosure of introducing two carrier gas streams and an aqueous solution of a peroxy compound **into a passage**." The Examiner should note that claim 33 calls for "introducing the first stream to a passage" and "mixing the vaporized aqueous solution and first carrier gas stream with the second carrier gas stream in a mixing zone downstream of the passage." There is thus no requirement for introducing two carrier gas streams **into a passage**, as the Examiner has indicated.

The Examiner is, however, correct in stating that Rickloff fails to teach the mixing of a second carrier gas with the resulting vaporized solution downstream of the passage.

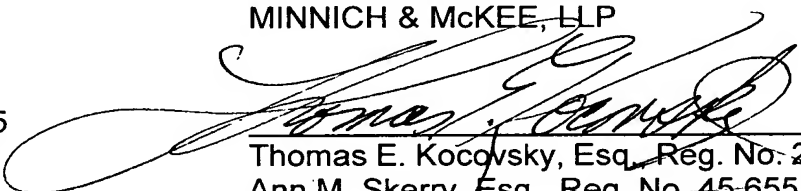
CONCLUSION

For the reasons detailed above, it is respectfully submitted all claims remaining in the application (Claims 1-33) are now in condition for allowance.

Respectfully submitted,

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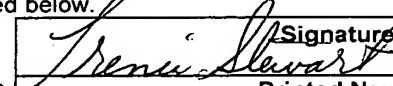
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Under 37 C.F.R. § 1.8, I certify that this Amendment is being deposited with the United States Postal Service as First Class mail, addressed to: MAIL STOP AMENDMENT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

Date May <u>10</u> , 2005


Signature Trena Stewart Printed Name

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